The Blue Ribbon **Commission on Transportation**

Benchmark Committee
Final Report
November 22, 2000

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Clark County

Blue Ribbon Commission on Transportation

Benchmark Committee Final Report

Executive Summary – Recommended Benchmarks

Benchmarks of Physical Condition

Benchmark 1: Zero percent of interstate highways in poor condition.

The Benchmark Committee found that slightly under five percent of the interstate highway was in poor condition in 1997.

Benchmark 2: Zero percent of major state routes in poor condition.

The Benchmark Committee found that less than one percent of major state routes were in poor condition in 1997.

Benchmark 3: Zero percent of local arterials in poor condition.

Data were unavailable for current conditions of local arterials in Washington. A pilot project under the auspices of the Legislative Evaluation and Accountability Program (LEAP) is compiling the available data.

Benchmark 4: Zero percent of bridges structurally deficient.

The Benchmark Committee found that slightly fewer than twenty-five percent of bridges in Washington were in deficient condition in 1997. The Benchmark applies to all bridges over 20 feet in length recorded in the State of Washington Inventory of Bridges (SWIBs).

Safety Benchmark

Benchmark 5: Complete seismic safety retrofits of all Level 1 and Level 2 bridges.

The Benchmark Committee found that the state has been pursuing a program to retrofit bridges and structures identified by risk level. Levels 1 and 2 are the two highest risk levels. Over 300 bridges have been retrofitted to date at a cost of about $40 million. However, almost 1,000 bridges remain to be repaired in the two highest risk levels at a cost of $560 million, $350 million of which is contained in a single structure, the Alaskan Way Viaduct in Seattle.

Benchmarks of Congestion and Mobility

Benchmark 6: Traffic congestion on urban interstate highways will be no worse than the national mean.

The Benchmark Committee found that between sixty and eighty percent of urban interstate highways are congested in Washington. The national mean is about forty-five percent urban interstate miles congested.

Benchmark 7: Delay per driver no worse than the national mean.

This Benchmark calculates delay per driver by metropolitan region. Delay per driver is a calculated average based on the number of licensed drivers in a region. It does not attempt to distinguish between individuals actually experiencing delay and those traveling on non-congested roads or not traveling at all. The Benchmark Committee found the national mean to be about forty hours of average delay per driver annually. Data show that the Seattle-Everett metropolitan area experienced seventy hours of average delay per driver annually; Vancouver-Portland experienced over fifty hours of average delay per driver annually; Tacoma and Spokane were below the national average. Individual regions of the state may choose to track more detailed data such as person delay on specific corridors.

Benchmark 8: Maintain Vehicle Miles Traveled (VMT) per capita at 2000 levels.

The Benchmark Committee found that VMT in Washington were about 9,000 miles per person per year in 1998. While Washington's population has grown about forty percent over the past twenty years, VMT have grown sixty percent, or about half again as fast. VMT have been growing faster than population since the mid-1980s. However, VMT per capita have leveled off at about 1990 levels.

Benchmark 9: Increase non-auto share of work trips in urban centers or reverse the downward trend of non-auto share of work trips in urban centers.

The Benchmark Committee found that the only reliable data for this Benchmark was the U.S. Census Bureau's Journey-to-Work surveys, the most recent of which showed a declining share of non-auto trips in the 1980-90 timeframe. Year 2000 Census data will be available early next year, 2001. The new accountability board should set a target for this benchmark when the data are available. Non-auto travel includes ferry, transit, walking and bicycling; commuter and light rail should be added when data become available.

Efficiency Benchmarks

Benchmark 10: Administrative costs as a percent of transportation spending at the state, county and city levels should improve to the median in the short-term and to the most efficient quartile nationally in the longer term.

The Benchmark Committee found that the state transportation agency's administrative costs fell between the third and fourth quartile nationally, (the first quartile being the lowest), or at roughly ten to twelve percent of spending. The committee added that these costs were not all due to inefficiency, but also to Washington's environmental ethic, culture of planning, neighborhood activism, and citizen involvement. The Benchmark applies to all transportation agencies in the state.

Benchmark 11: Washington's public transit agencies will achieve the median cost per vehicle revenue hour of peer group transit agencies.

The Benchmark Committee found that King County Metro and Pierce Transit's cost per vehicle hour were thirteen percent and fourteen percent respectively, above their peer group transit agencies nationwide. The Committee also found that transit-operating costs are highly dependent on wages of transit personnel, which in turn are related to the economy and cost of living in the region.

Further Benchmarks to be Developed:

The following benchmarks are recommended for further development by the proposed accountability board that monitors and tracks benchmark progress. The accountability board should develop metrics and identify targets and responsibility for these benchmarks.

Traffic Safety Benchmark: Traffic accidents will continue to decline.

The Committee found that Washington has slightly less than 1.5 fatalities per 100 million vehicle miles, which is less than the national average of about 1.7. All accidents, including those involving bicyclists and pedestrians, should decline.

Freight Mobility Benchmark: Freight movement and growth in trade-related freight movement should be accommodated on the transportation system.

The Benchmark Committee found that growth in trade-related freight movements by truck (up over seventeen percent annually in the 1991-98 timeframe) and by railcars (up about nine percent annually in the 1991-98 timeframe) exceeded other economic growth rates. The Freight Mobility Strategic Investment Board (FMSIB) should be involved in developing additional benchmarks of freight movement and the supporting data to monitor progress.

Air Quality Benchmark: Maintain air quality (carbon monoxide and ozone) at federally required levels.

The Benchmark Committee found a declining incidence of carbon monoxide and ozone (the components of smog) in the state's urban areas since the 1970's. However, recently our air quality has come close to exceeding allowable levels on several occasions. Federal law requires that regions be sanctioned by loss of federal funds if this happens. The accountability board is asked to consider measuring greenhouse gases, particulates, and visibility when data and appropriate standards are available.

Project Cost Benchmark: Improve operations, maintenance, and project delivery costs.

Create benchmarks for the operations and maintenance and capital project delivery functions of transportation agencies, parallel to that suggested for their administrative costs. The new accountability board that monitors and tracks benchmark progress is directed to develop metrics to compare Washington's project development, design, permitting and construction costs with best practices nationally.

Transportation Revenue Benchmark: Ensure that transportation spending keeps pace with growth.

Washington's transportation system must not be allowed to fall behind the pace of its population and economic growth. The accountability board should develop a benchmark that monitors transportation revenues and how they track transportation needs.

Person Delay Benchmark: Reduce overall hours of travel delay per person in congested corridors.

The new accountability board should develop and track a benchmark of person delay that can be used across all modes of travel.

Blue Ribbon Commission on Transportation

Benchmark Committee Final Report

Introduction

The Blue Ribbon Commission on Transportation's Benchmark Committee was formed as an ad hoc committee in October 1999 and met five times during the period October 1999 to April 2000. During that period, Committee members had the opportunity to:

- Develop benchmark topic areas and a committee workplan;
- Agree upon principles for evaluating data and goals for how the Commission should use benchmarks;
- Receive briefings and evaluate a wide variety of available national, state and local transportation data;
- Recommend a set of preliminary benchmarks to the full Commission.

This Committee report outlines the benchmarks the Committee agreed best captured an overview of transportation in Washington State. It also includes a number of additional recommended benchmark topic areas that are being referred for future consideration as benchmarks. The report describes the process the Committee went through to arrive at its recommendations, the data it evaluated, the principles and goals identified by the Committee, and the relationship of the benchmarks to the key themes of the three standing committees, Investment Strategies, Administration and Revenue.

Use and Purpose of Benchmarks

During the initial September 1999 retreat, during the meetings of the Benchmark Committee and finally, during the public review and comment period, many views were voiced on how benchmarks should be used. From the public and private sectors, from stakeholders, managers and citizens, Commissioners heard different perspectives on what role benchmarks should play in planning, decision-making and funding of the transportation system.

- Most generally, there were those who believed benchmarks should paint a vision of the future;
- There were those who felt benchmarks should be broad but measurable policy targets;
- There were others who believed benchmarks needed to set comparisons against "best practices" in other state or countries;
- Some felt benchmarks should be accountability measures to manage by;
- Others felt benchmarks should be used to direct investments and funding.

Each of these views implied a different understanding of how specific, how comprehensive or how data-driven benchmarks needed to be. Volumes of academic and practical research have been conducted on the general topic area of performance measurement in transportation. Detailed metrics have been developed by engineers and public works managers to monitor and manage spending and outcomes in the areas of operations and maintenance, pavement management, congestion management, investment modeling, project delivery, safety and public satisfaction. Benchmarking can be carried out at the level of technical or fiscal management, local or systemwide policy-making or public communication. Benchmarks embody and reflect people's values, lifestyle choices and pocketbook concerns.

Simultaneously during the Commission's process, it became clear that benchmarks can awaken concerns and fears about loss of community control, accountability to standards imposed from above, and liability for failure to meet targets. The highly dispersed authority over transportation that is noted elsewhere in the findings of the Commission exacerbated these concerns.

All of these perspectives were brought to bear and considered in the development of the Commission's recommended benchmarks. Commissioners understood that, ultimately, benchmarks will be effective only as they are generally agreed upon by the public and by policy-makers and treated seriously by the transportation community. The benchmarks recommended in this report are not intended to be prescriptive in every instance or to micromanage individual communities' and agencies' decisions. They are offered by a group of dedicated and thoughtful representatives of business, labor and government as a guide for transportation investment, funding and accountability into the future.

Committee Process

During the Commission retreat in September 1999, a preliminary list of eight benchmark topic areas was proposed. They were:

- Physical condition of the transportation system,
- Safety,
- Mobility (congestion relief),
- Mobility (travel options),
- Freight movement,
- Global trade competitiveness,
- Environment (air quality), and
- Cost efficiency.

Members discussed these topics and found that while general agreement existed on topics, many issues were quickly identified about the nature and detail of data to support any future benchmarks. An ad hoc committee was proposed to develop recommendations. It was formally appointed by the Steering Committee and met for the first time in October 1999. A technical

advisory team representing WSDOT, cities and counties was formed and asked to assist the committee with issues related to data collection and definition.[1]

At the committee's first meeting, members discussed the purpose of the benchmarks, their appropriate level of detail and the audience to which they should be directed. Members concluded that the Commission's role with respect to benchmarks should be to set high-level targets that help articulate the vision of the state's transportation system.

Audience for benchmarks. The committee agreed that the benchmarks should be directed at two primary audiences: the public and the legislature. Benchmarks were to describe the current state of transportation and set targets that would be achievable through the Commission's recommendations in the areas of administrative reform, investment strategies and funding. Benchmarks were to be a communication device, not an attempt to measure performance at individual agency or jurisdiction levels. It was the system as a whole that was the Commission's charge.

Data sources. Committee members agreed that benchmarks should be based on statewide data (state, county and city levels) whenever possible and that comparative data would be used where available to illustrate Washington's system performance compared to other states. Another working principle agreed upon was that the committee would use only existing data that were systematically collected over a number of years, such that a trend could be illustrated and could be tracked into the future. The committee chose not to recommend or initiate new data gathering efforts solely for the purpose of benchmarking.

Benchmarks vs. indicators. After a number of meetings and detailed briefings and discussions of available data sources and their limitations, the committee found that some of its original topic areas lent themselves to illustration of trends over time but were not amenable to actual benchmarking. Benchmarking as defined by the committee involved identifying a measure of some aspect of system performance, illustrating a trend over time compared to a benchmark (such as a national average) and then setting a target that could be influenced through direct intervention or investment decisions.

For example, the condition of the roadway system was straightforward to benchmark because data had been collected nationally for many years using common and consistent standards defining pavement condition. So Washington's average pavement condition on its interstate and state highways could easily be compared to the average pavement condition in other states. An easily measurable target could then be set to improve or maintain the condition at an agreed upon level and then investments could be directed to achieving that goal.

On the other hand, in the area of traffic safety, while there were good data sources on accidents by type, by seriousness and by cause, there was little direct relationship between the accident rate in a particular state and the investment decisions made by transportation officials. The committee chose to develop "indicators" for such topics, so that this aspect of the transportation system could be described. Subsequently, during public and stakeholder review of the proposed

[1] The technical advisory group consisted of Charlie Howard, Transportation Planning Manager at WSDOT, Chris Mudgett, Special Projects Manager at the County Road Administration Board, and Jim Seitz, Transportation Specialist with the Association of Washington Cities.

benchmarks, comments were received that urged the Commission to remove the distinction and convert indicators to benchmarks to emphasize their significance to the transportation system.

Benchmark Committee Principles and Goals

Based upon the committee's discussions of the purpose, potential audiences and a variety of data sources for benchmarking, the following goals and principles were eventually distilled and became the guidelines for committee efforts:

- Benchmarks should be a communication device
- Benchmarks should set high-level targets that help articulate the vision of the state's transportation system
- Benchmarks will be directed at two primary audiences: the public and the legislature

- Only existing data sources will be used, for which several years of data are available
- Statewide data should be used whenever possible
- Comparative data should be used whenever available

Relationship to Major Themes

Like the three standing committees, the Benchmark Committee worked independently on the topic areas identified by its members, but found that its efforts began to converge on a number of the same themes as those arrived at by the Administration, Investment Strategies and Revenue Committees. Those major themes included:

- Make efficient use of existing resources
- Empower regions to solve regional problems
- Focus on taking care of the system we have
- Ensure that statewide connections work
- Promote the most efficient mix of solutions
- Ensure the safety of the travelling public
- Foster economic development and the movement of goods
- Support a high quality of life

The benchmark topics linked directly to six of the eight themes developed by the Commission:

Major Themes	Benchmark Topics
Make efficient use of existing resources	Cost efficiency
Empower regions to solve regional problems	
Focus on taking care of the system we have	Physical condition
Ensure that statewide connections work	
Promote the most efficient mix of solutions	Mobility (congestion, options)
Ensure the safety of the travelling public	Safety
Foster economic development & movement of goods	Freight movement / Trade competitiveness
Support a high quality of life	Environment (air quality)

The two themes related to the structure and governance of transportation, statewide connections and regional problem-solving, did not appear to lend themselves to benchmarking which deals with outcomes and results, not with the structures or means of getting to the results. Nevertheless, there was an indirect linkage in that these two themes as well, related to successful achievement of all of the benchmarked outcomes.

Recommended Benchmarks

This section discusses, by topic area, the benchmarks and indicators selected to be recommended to the full Blue Ribbon Commission. In many of the topic areas addressed below, additional data sources were considered for benchmarking and were eventually not selected. A full discussion of the data sources that were not selected for recommendation in this final report can be found in the Interim Report of the Benchmark Committee, dated May 8, 2000.

Physical Condition of the System

Pavement Condition. The primary source of consistent, comparable, statewide data available over time is the federal Highway Performance Monitoring System (HPMS). Each year every one of the 50 states is required to submit to the Federal Highway Administration (FHWA) data on the structural condition (cracking), roughness and rutting of all state highways.

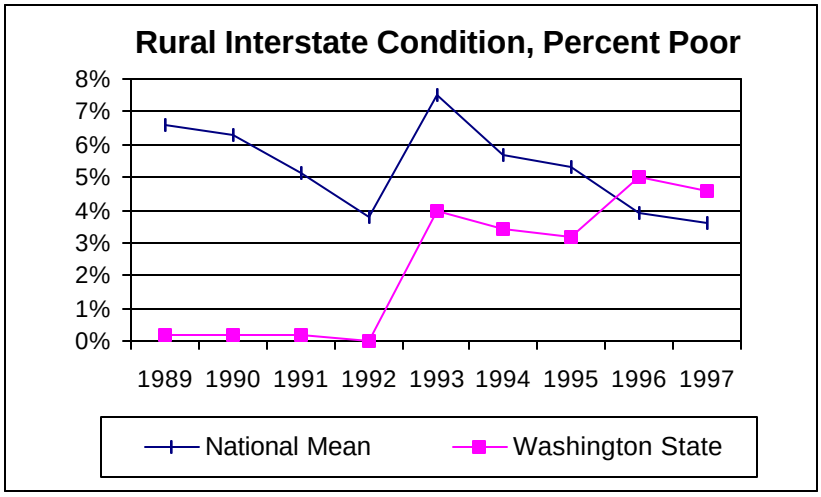
- **State.** WSDOT collects these data and submits them to the federal government where they are compiled in the Highway Statistics report. WSDOT also conducts sampling of pavement conditions on county and city arterials and reports these data also to FHWA. WSDOT's target is to have no pavement in poor or very poor condition.
- **Counties.** Washington's 39 counties report the structural condition of county arterials to the County Road Administration Board (CRAB) every two years. These data are used in pavement management systems that determine lowest life cycle costs for pavement preservation.
- **Cities.** Data on the condition of city streets are not centrally collected in a comprehensive way. While about 70 % of city street miles are managed with pavement management systems, there is no uniform rating and tracking system for city streets.

Data show that in 1971 about 30% of the state's highways were in poor condition, but by 1998 through consistent preservation funding, that number had declined to less than 10%. Even post-695, the Transportation Commission has made pavement and bridge preservation a high priority. Starting in the early 1990s, HPMS switched its rating index from cracking to roughness which led to an apparent "bump" or worsening of pavement condition in 1993 on the graphs reviewed by the committee. While the state switched to the roughness index as required by the federal reports, counties continued to use the previous rating system, making the county data no longer directly comparable to the state data after the early 1990s.

The HPMS data are used by Professor David Hartgen of the University of North Carolina at Charlotte to prepare annual reports comparing and ranking the 50 states on the condition of their roadway systems. Because these data are readily available and can be used to compare

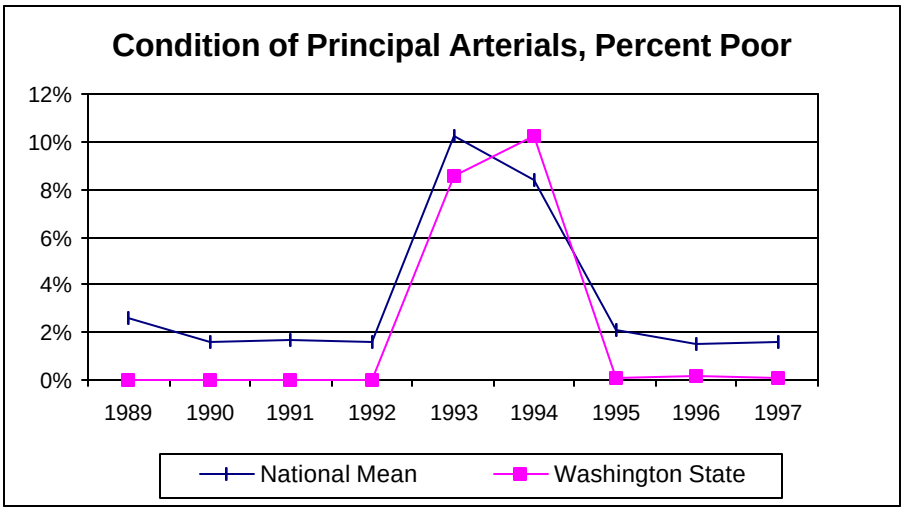
Washington to a national average, this source was selected by the committee for its first benchmark. The committee agreed to set a target of zero percent in poor condition.

Benchmark 1: Physical Condition
Target: Zero percent poor



The committee then chose to add the state's major principal arterials as an additional benchmark since most of the state's drivers do not use the interstate highway system as often as they do the major state routes (such as SR 395, 2, 12 and 101). It was felt that these are the ones more people actually travel on and care about.

Benchmark 2: Physical Condition
Target: Zero percent poor



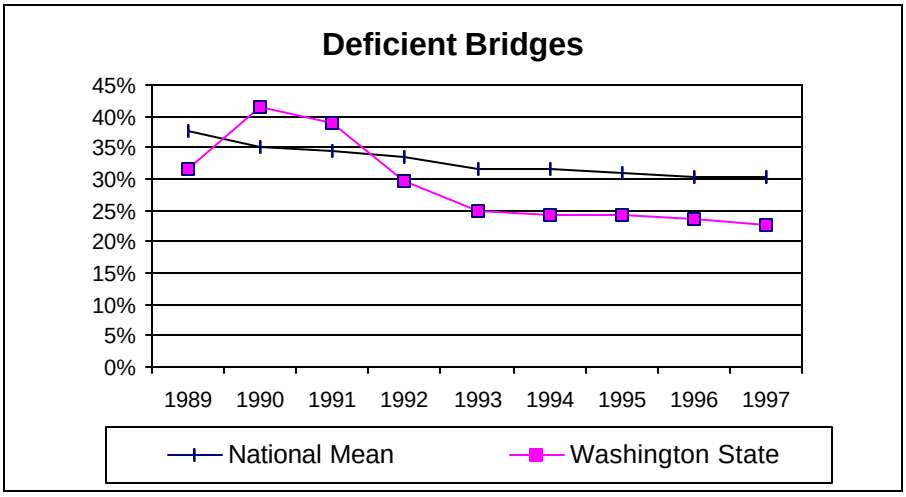
The committee examined the available data on the condition of local arterials, which are being compiled by a pilot project under the auspices of LEAP, the Legislative Evaluation and Accountability Program. These data were not yet available at the time of the committee's

efforts, but a placeholder **Benchmark 3** was created to indicate that such a benchmark was intended to be added when the data became available.

Bridge Condition. Uniform data is collected by the State of Washington Inventory of Bridges (SWIBS) for state, county and city bridges over 20 feet in length. Two standards are used: structurally deficient (e.g., weakened footings) and functionally obsolete (e.g., narrow lanes). A scale of 0 to 100 is used to rate each condition. State and federal dollars have been focused on the structurally deficient bridges and the trends indicate that the bridges with a sufficiency rating of less than 50 have been significantly reduced in recent years.

Again, Professor Hartgen's data show the percent of deficient bridges in Washington compared to the national mean. The committee chose as its fourth benchmark the percent of bridges that are deficient and set a target that zero percent should be structurally deficient.

Benchmark 4: Physical Condition
Target: Zero percent poor

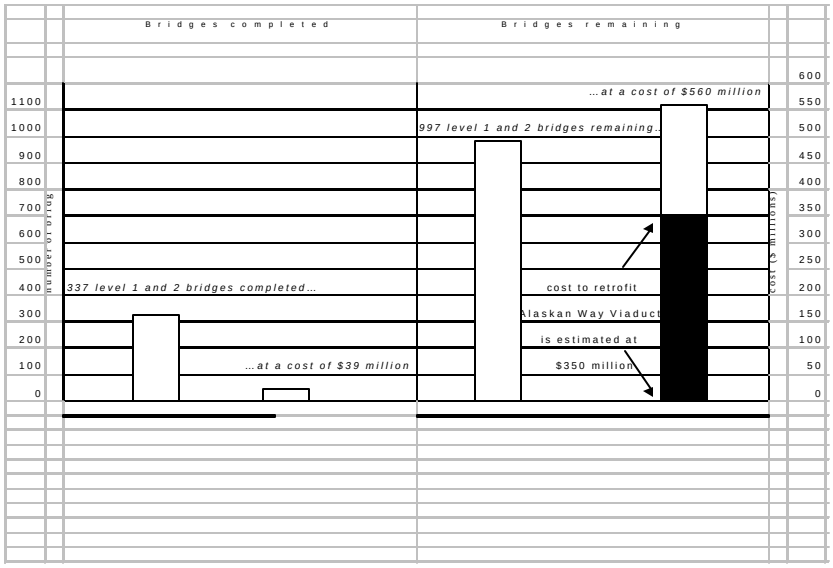


Safety

The committee reviewed a variety of data relating to safety, including accident data, roadway safety and seismic safety of structures. Accident statistics have been maintained at the state and national levels for many years and are readily available.

Seismic Safety. Another area of safety the committee considered was the seismic retrofit of bridges and other elevated structures in the state's earthquake-prone regions (primarily western Washington). The state has been actively pursuing a program to retrofit bridges and structures identified by risk level. Over 300 bridges have been retrofitted at a cost of about $40 million. However, almost 1,000 bridges remain to be repaired in just the two highest risk levels (1 and 2). The cost of the remaining retrofits is $560 million, of which the largest share is a single structure, the Alaskan Way Viaduct at some $350 million. The committee agreed to **Benchmark 5** with a target that said all risk level 1 and 2 bridges should be repaired. This is not to be taken out of context however of the need to make the most cost-effective decision that may be replacement rather than retrofit.

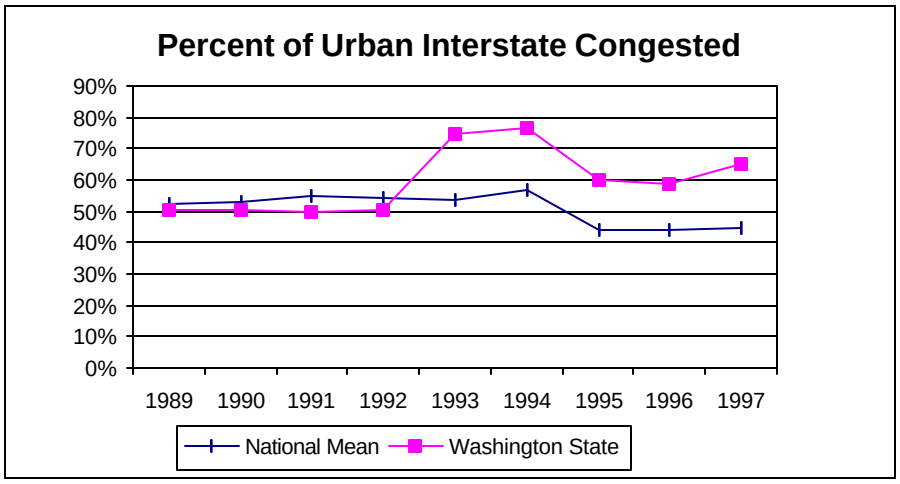
Benchmark 5: Safety
Target: Complete seismic safety retrofits of all level 1 and 2 bridges



Mobility -- Congestion Relief

Highway Congestion. In 1999, about 11% (794 miles) of the state highway system was congested. By 2020, it was projected that 37% (2,600 miles) would be congested. Again using Professor David Hartgen's comparison of Washington to the national mean, the committee learned that between 60% and 80% of the state's urban interstate system is congested, considerably higher than the national average. Committee members felt that the national comparison was especially useful for the benchmark on congestion, because it shows the severity of Washington's problem and serves as a call to action. They agreed to recommend **Benchmark 6** and set a target that proposed that Washington's congestion be no worse than the national average.

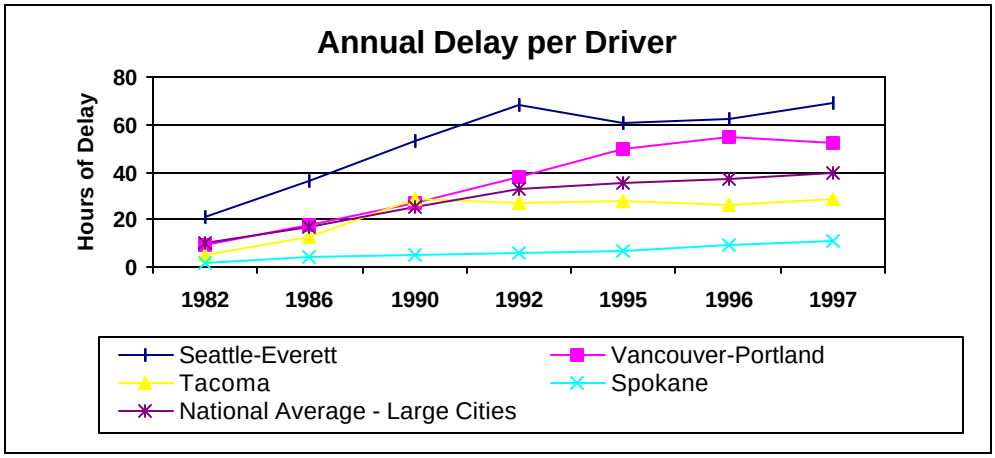
Benchmark 6: Traffic Congestion
Target: Congestion no worse than national mean



Members knew that this was an aggressive target but felt that in order to communicate a real vision of a first-class transportation system, a target would have to stretch the limits of what might be achievable. Members discussed the concern that the benchmark not be used to convey the impression that congestion could be "fixed" with investments in capacity. They agreed that achieving the target would require a mix of various strategies and that aspiring to the goal was nevertheless the right message to communicate.

Driver Delay. Another source of data the committee considered and chose to benchmark was the Texas Transportation Institute's calculation of driver delay by metropolitan area. Whereas the previous benchmark looked at the state as a whole, there were clearly large differences between urban regions and this data source would allow that point to be illustrated. Delay per driver is a calculated average based on the number of licensed drivers in a region. It does not attempt to distinguish between individuals actually experiencing delay and those traveling on uncongested roads or not traveling at all.

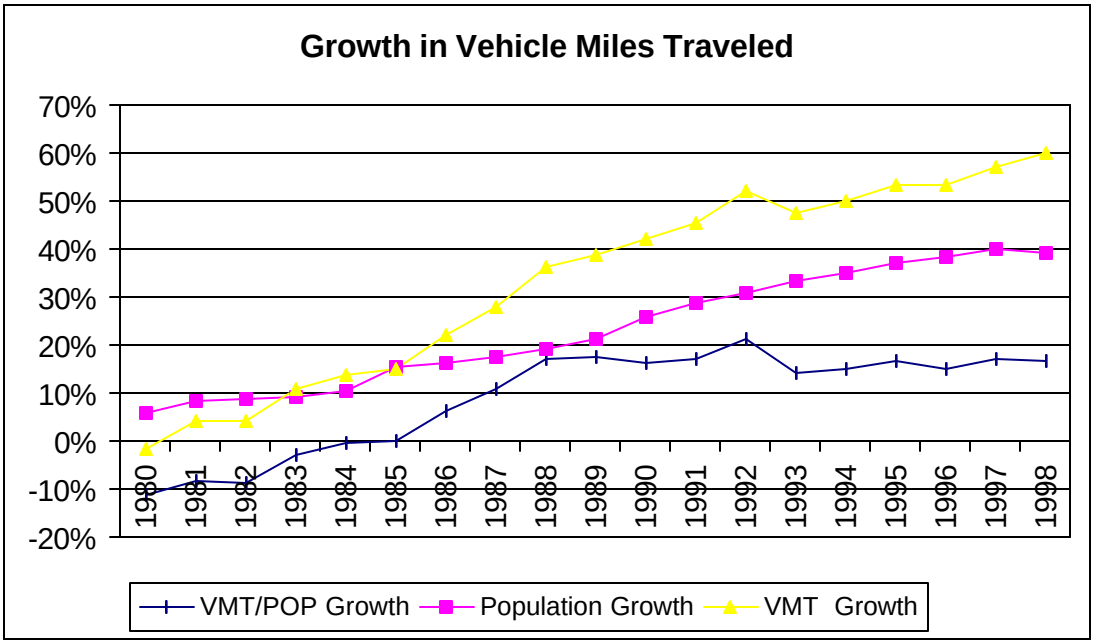
Benchmark 7: Traffic Congestion
Target: Delay no worse than national mean



The data show that the Seattle-Everett metropolitan area experienced 70 hours of average delay per driver annually, compared to the national average of about 40. The Vancouver-Portland region was also well above the national mean, while Tacoma and Spokane were still fortunate to be below the national average.

System Usage. In the last twenty years, Washington's population has grown about 40% while vehicle miles traveled, or VMT, has grown 60%, or half again as fast. VMT has been growing faster than population since the mid-1980s.

Benchmark 8: Traffic Congestion
Target: Maintain VMT per capita at 2000 levels



The committee was interested to note that vehicle miles per capita had not grown quite as rapidly over the 20-year period and had in fact leveled off in 1990 at about 9,000 miles per person per year. The committee adopted **Benchmark 8** that maintained the 2000 VMT level into the indefinite future.

The topic areas of physical condition and congestion were relatively well documented and had various data sources available for consideration. The remaining topics the committee considered, mobility options, freight movement and cost efficiency would turn out to be much more difficult.

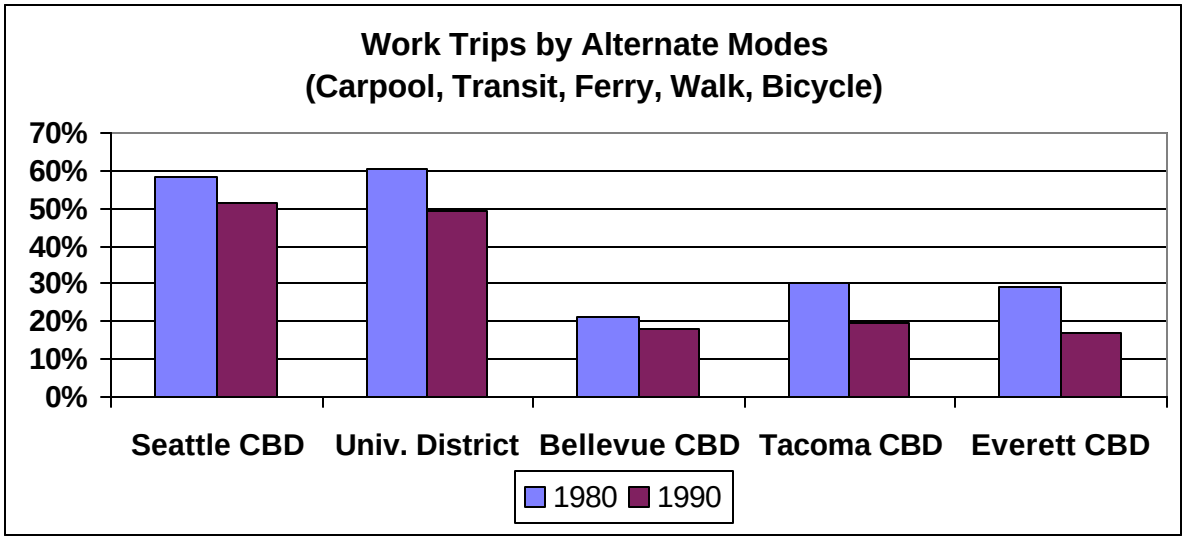
Mobility -- Travel Options

The discussion of travel options began with a question about how to measure the availability of viable alternatives to single occupant driving. The committee learned that data gathering about mobility options was in the early stages and generally data had to be calculated based on computer models or determined through random sample surveys, neither of which is entirely reliable or consistent over time.

Mode Share. The committee was interested in benchmarking the availability of modal options to individuals using the transportation system in various parts of the state. One avenue pursued by the committee was to seek data on the share of trips being taken in high occupancy vehicles (HOV), transit, ferries, and by other modes such as walking and bicycling. The goal was to develop a target that would move toward increased use of modes other than the single occupant vehicle and reduce the reliance on roadway capacity as a solution to growing transportation demand.

The data the committee found most useful for benchmarking purposes were the U.S. Census Bureau's Journey-to-Work surveys. Every ten years during the census, detailed surveys ask people where they work and how they travel to their jobs. These data are aggregated by business district.

Benchmark 9
Target: Increase non-auto share of work trips or reverse downward trend



The 2000 census survey data will be available in early 2001 and an additional Journey-to-Work data point will be added to this graph. Although the trend from 1980 to 1990 was a declining share of non-auto trips, that trend will need to be reversed if growth is to be accommodated in urban areas of the Puget Sound. The committee recommended adoption of **Benchmark 9** to increase the non-auto share of work trips but felt it had insufficient information to develop a specific target. A placeholder was agreed to until additional data could help to set a realistic and achievable target.

Cost Efficiency

Benchmark Committee members spent more time examining issues of cost efficiency than any other single topic area. There was a strong perception that this issue was highly important to the public, to elected officials and to the business community and therefore needed to be a focal point of the Blue Ribbon Commission's efforts. Yet the perceptions of what constitutes

efficiency and how it should be measured varied considerably, depending on whose perspective was taken. Because every transportation agency and government entity has slightly different methods of categorizing, accounting for and tracking expenditures, finding common ground for comparisons was extraordinarily difficult. Cities, counties and the state varied among themselves. Washington varied from other states. National averages were available for some types of transportation expenditures but little was known about how agencies in other states categorized their costs and what elements might be included. Managers in every industry know that allocating overhead costs to capital programs involves gray areas that will differ among organizations.

After reviewing and considering various presentations of administrative, O&M and capital project costs at the state, county and city levels and for transit agencies, the committee recommended two benchmarks: one for the state, counties and cities and the second for transit.

State, county and city administrative costs as a percent of total spending. The most common method of measuring administrative cost efficiency is to calculate administrative costs as a percent share of total disbursements. Administrative costs for the state transportation system, measured this way, range from about 8% to about 15% of total, depending on which costs are included in the definition of administration and how large the total disbursements are in any given year. Thus in a year with a large new capital program the administrative percent of total might look small even if the functions were exactly the same as the previous year in which there was a smaller total capital program.

The Benchmark Committee reviewed available data collected by the federal government in its Highway Statistics report and analyzed by Professor David Hartgen to compare the 50 states' spending patterns. These comparisons appeared to indicate that Washington was at the high end of administrative costs. However, the data reported to the federal government included total state overhead costs, including miscellaneous expenditures not reported in the basic categories of construction, operation or maintenance. Using this data source, Washington's state administrative totals appeared to fluctuate between 12% and 14% in recent years compared to a national average around 8%. However, WSDOT's direct "support" programs are at about 8% of total WSDOT disbursements and there is no information on what costs are included by other states in their reports.

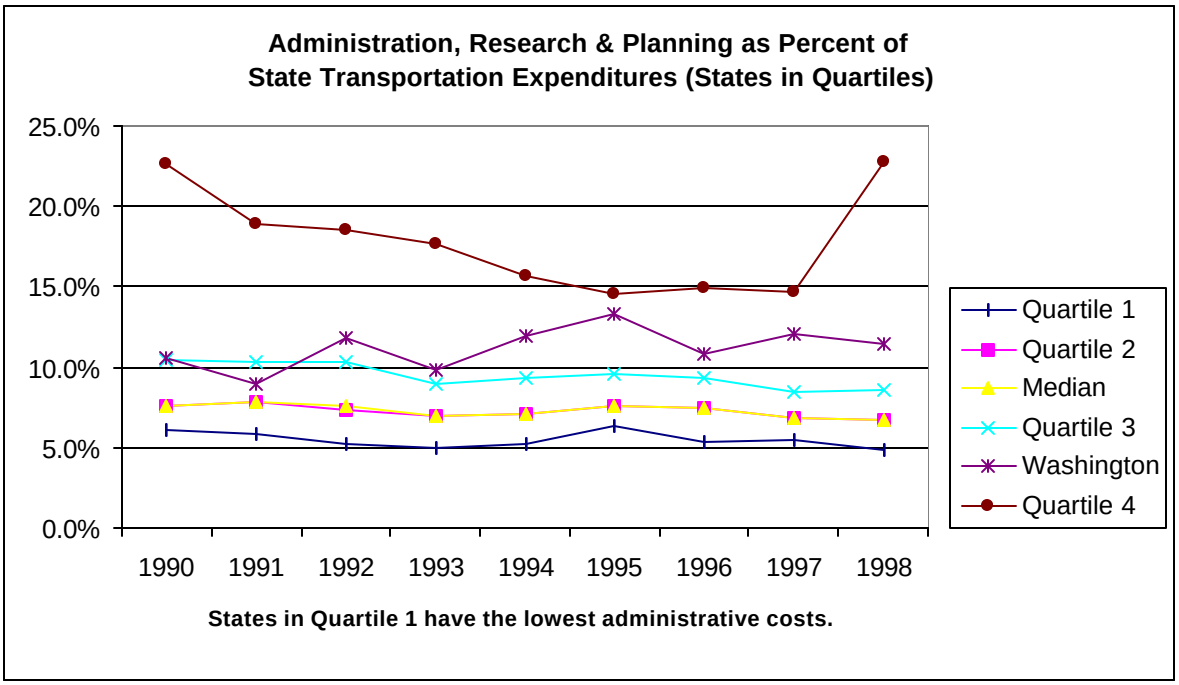
The committee reviewed available city and county data that indicated that administration costs as a percent of total transportation disbursements appear high, especially for urbanized and older jurisdictions. County and city staff advising the committee provided a number of briefings on the nature of cost accounting and classification in local government. While both cities and counties use BARS, the state's budgetary accounting and reporting system, there is little consistency across jurisdictions in how costs are classified. What appear to be wide differences in administrative costs are also attributable in large measure to whether a jurisdiction maintains its planning, engineering and construction management functions in-house or contracts them out, in which case the associated overhead is not carried on the jurisdiction's books.

Expenditures in the categories of construction, maintenance and administration are not tracked on an individual jurisdiction basis at this time, however, a legislative pilot project is underway to create systemwide databases of transportation spending. Together with contextual indicators

such as population, miles of roadways, vehicle miles traveled as well as outcome measures such as pavement condition, these data will eventually provide the ability to track and measure the performance of the transportation system at all levels. Not wanting to benchmark local governments' costs separately from state costs until then, the committee opted to set a single benchmark for administrative costs at the state level.

For its **Benchmark 10**, the committee opted to look at administration, research and planning as a percent of total state spending, by state, and recommend a target that Washington's administrative costs be in the top (most efficient) quartile nationally. The analysis showed that Washington's state administrative costs have ranged from 10% to 12% since 1990, a range that falls between the third and fourth quartile of states. The median of the states has been at about 7% and the top quartile has hovered at just above 5%. While Washington has been somewhat high among states, the committee felt it important to communicate that this is not necessarily all due to inefficiency, but also due to Washington's ethic of environmental protection, and its culture of planning, neighborhood activism and citizen involvement.

Benchmark 10
Target: Achieve the national median in administrative efficiency in the short term and the top quartile in the longer term



The committee made clear that this target on administrative efficiency was intended to apply not just to WSDOT, but to all transportation agencies, including cities, counties, transit, and special purpose entities like TIB, CRAB, DOL, legislative staff, etc. Because the target will represent significant change for some agencies, reductions and reallocations should be phased in over time.

Transit operating costs. Transit agencies report their revenues and expenditures, along with operating statistics, annually to the Federal Transit Administration. These data are entered into a national transit database that allows comparisons to agencies elsewhere in the country.

Washington's transit agencies have consistently ranked high in costs per passenger and per vehicle hour compared to their peers nationally, although, in recent years cost indicators have been flat or declining for Washington transit agencies.

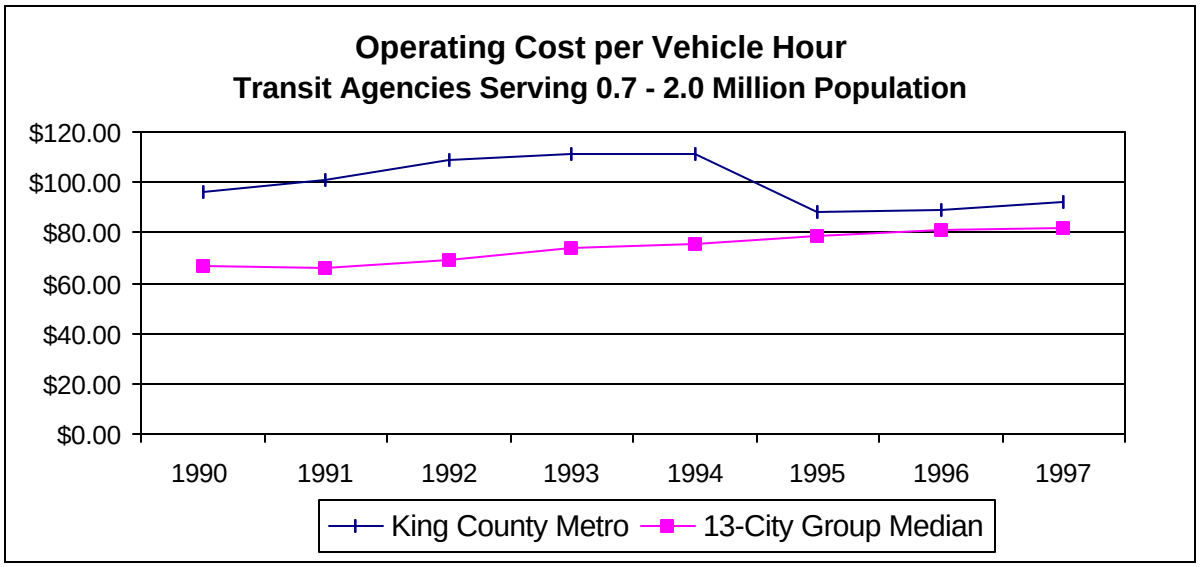
Transit operating costs are highly dependent on the wage levels of operators and maintenance personnel, which in turn are related to the cost of living and the economy in a particular region. In the urban areas of Washington, the economy has been strong and there may well be justification for higher operating costs than in similarly sized cities elsewhere in the country. Unlike the administrative costs discussed above, operating costs per hour in a high cost region like Washington are unlikely to ever achieve top quartile standing.

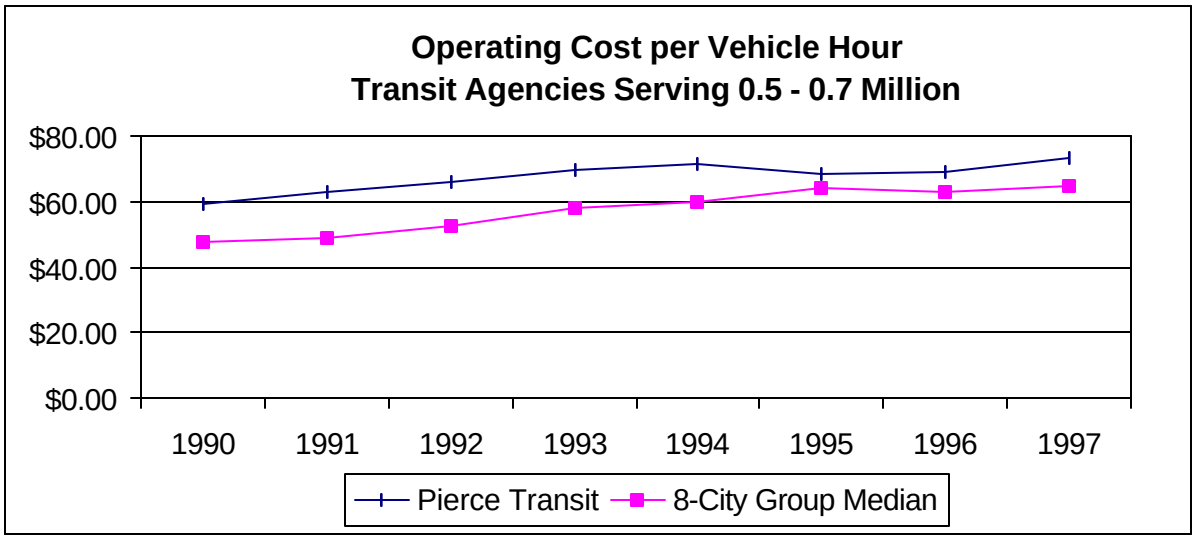
Additionally, in the wake of Initiative 695, transit revenues are down by as much as 40% and are already bringing operating costs down as administrative costs are reduced and the least productive services are cut. It is probable that transit cost indicators will be coming down at Washington's transit agencies. For this reason, past trends may not be a useful guide to future performance.

To compare like-size agencies only, the committee chose not to use a national mean or median as the target, but rather suggested for **Benchmark 11** to use a peer group of like size agencies for comparison purposes. Two examples follow for illustrative purposes.

Benchmark 11

Target: Achieve the median cost per vehicle revenue hour of peer group transit agencies





King County Metro is compared to a group of 12 other transit agencies that have large urbanized service areas of 0.7 to 2.0 million population. In 1997, Metro's cost per vehicle hour was $92.45 while the median of the 13-city peer group was $81.61. This is a 13% premium.

Pierce Transit is compared to an 8-city peer group serving regions with a population of 0.5 to 0.7 million. The median cost per vehicle hour in this group was $64.43 in 1997, while Pierce Transit's cost was $73.45, a 14% premium.

Further Benchmarks to be Developed

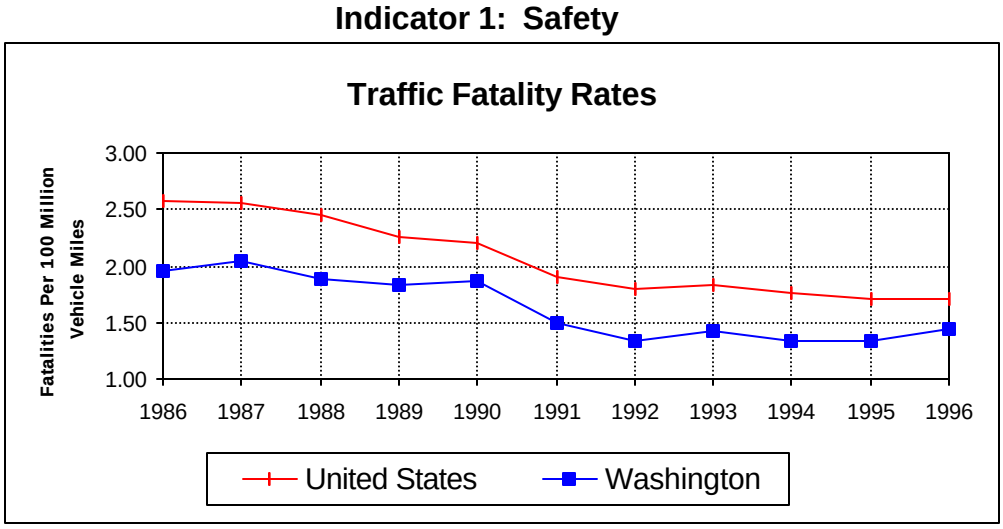
This section discusses six topic areas the Benchmark Committee felt needed additional work by a future group. Three of the topics, traffic accidents, freight mobility and air quality, were initially recommended as indicators by the committee. Public and stakeholder input during the public review period indicated support for development of benchmarks and targets for these topics.

One new topic, transportation revenue, was not considered by the committee but was suggested for benchmarking. Two other topics, project delivery costs and travel delay per person, were considered extensively by the committee, but had insufficient existing data available to create a meaningful benchmark at the time of the Blue Ribbon Commission's work. Future data collection and analysis will be needed to develop suitable comparisons and trends and to allow for target-setting.

At the time of last deliberation at the Benchmark Committee level, a potential recommendation was being formulated by the Administration Committee to create a new Accountability Board that would be responsible for future tracking and reporting on these and other benchmarks. Reference is made below to the new Board as the entity charged with the further development of these additional benchmarks.

Accident Rates

The committee began by reviewing data on accident rates in Washington and compared to the rest of the country. Data are collected and monitored by the Washington Traffic Safety Commission and by WSDOT and reported to the National Safety Commission for comparison purposes. Statistics showed that all accident rates have been declining here and in other states for a number of years. The reasons include increased enforcement of drunk driving laws and higher seat belt use. The committee first reviewed fatality rates and saw that Washington was already considerably better than the national average.



The committee wondered about injury rates, property damage caused by auto accidents, and pedestrian and bicycle accident rates which are often in the forefront of a community's consciousness. Upon consideration and further review, the committee felt that Washington's accident rates were already good and, because they were not directly influenced by investment choices, did not lend themselves well to benchmarking.

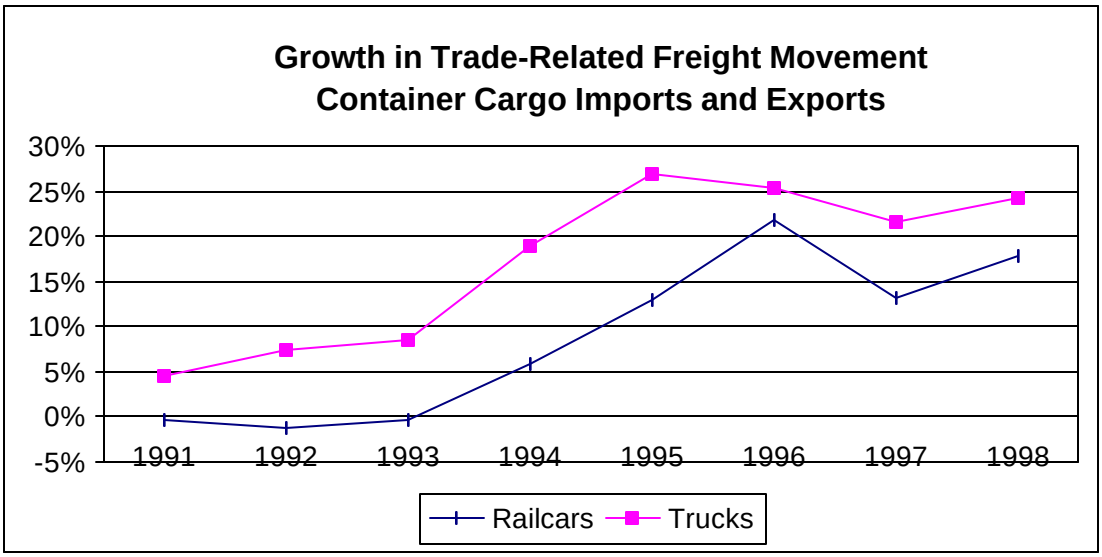
After receiving input suggesting development of a benchmark and target, the committee agreed to recommend to the proposed new Accountability Board the following safety target: **Traffic accidents will continue to decline.**

Freight Movement / Global Trade Competitiveness

While they began as two separate topic areas, freight movement and trade competitiveness emerged as closely intertwined and the committee considered several data sources that dealt with both. The freight industry has a highly complex and diverse structure that includes international container cargo, agricultural bulk products, air cargo, domestic package delivery and shipments by ship, air, rail, barge, truck and small van. This industry has no single set of data or indicators to measure its performance and no single entity is responsible for coordinating its components. The committee reviewed data sources on truck traffic, freight volumes, freight corridors, air cargo, and port market share and chose not to use each of these sources, primarily for reasons of data consistency over time.

The data source chosen was container cargo movement through the state's ports. The state's public ports track data on container and bulk cargo movements and whether the cargo arrives and departs on truck or rail car. The ports were able to calculate the number of trucks and rails cars required to ship the cargo to and from the major ports. The following table shows the dramatic growth in container cargo movements in the 1990s.

Indicator 2: Freight Mobility



The committee chose to use the data on truck and rail car numbers as an indicator to communicate to the public information about the growth of freight movement on the state's transportation system. A general target was adopted: **Freight movement and growth in trade-related freight should be accommodated on the transportation system.**

However, stakeholders from the freight industry felt that a true benchmark of freight movement should be based on travel time or travel delay and should be developed with the help of the truck carriers and railroads. The Freight Mobility Strategic Investment Board has committed to working on development of such a benchmark.

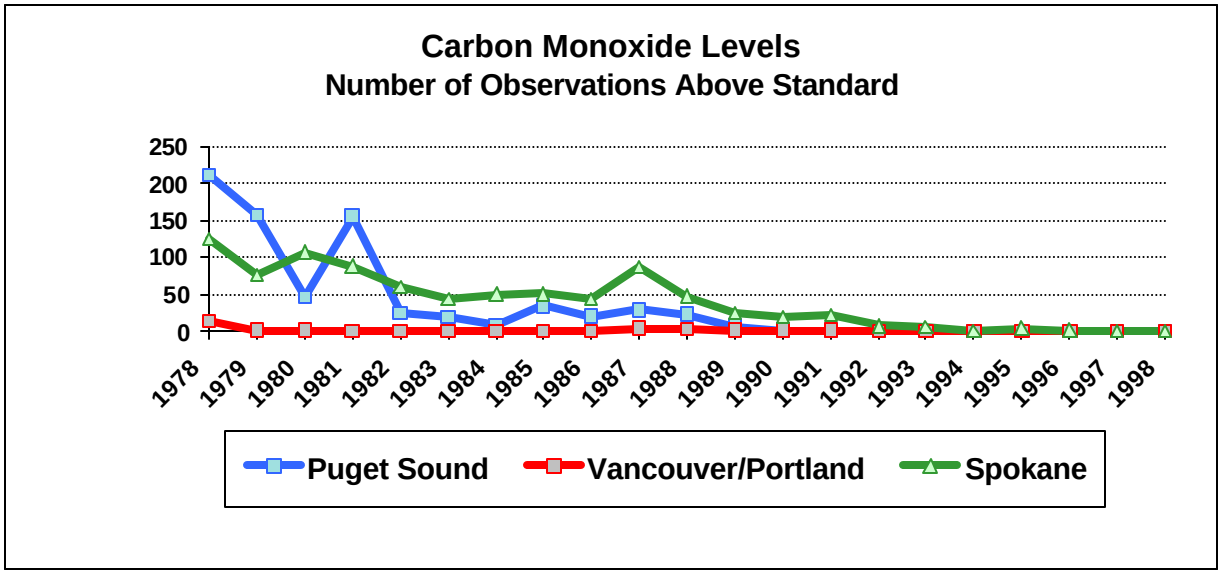
Environment – Air Quality

As with a number of other topics the committee wanted to benchmark, air quality data were not available in aggregated formats suitable for a high-level summary. Air quality is measured by pollutant at a given location and point in time. The committee chose to limit its measure to the two most common pollutants, carbon monoxide and ozone (the components of smog). Other pollutants considered but not used included nitrogen oxide, carbon dioxide and particulates.

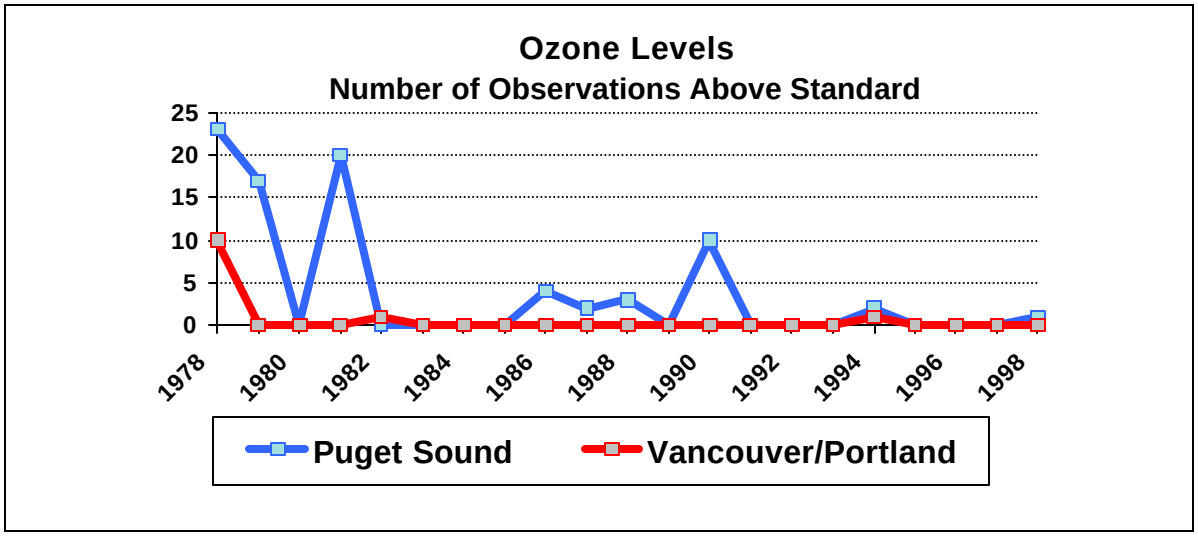
For ozone and carbon monoxide, the data showed a declining incidence of pollution since the 1970s and a steady state in maintaining federal standards in recent years. However, recently our air quality has come close to exceeding allowable levels on several occasions. Federal law

requires that regions be sanctioned by loss of federal funds if this happens. The committee initially chose not to suggest benchmark targets of continuing to maintain low levels of pollution since federal laws already require that and mechanisms are in place to monitor and sanction regions that do not comply. The committee chose to adopt air quality as an indicator rather than a benchmark.

Indicator 3: Air Quality



Indicator 4: Air Quality



Subsequently, upon receiving public input strongly suggesting the development of a benchmark the committee recommends that the accountability board develop an air quality benchmark and also further examine appropriate standards for greenhouses gases, particulates and visibility. The

committee adopted the following target language **Maintain air quality (carbon monoxide and ozone) at federally required levels.**

Transportation Revenues

During the public review phase of the Commission's work, a number of comments were received about the relationship between the ability of transportation agencies to meet the benchmarks and the need of revenues and investments to keep pace. If a benchmark target calls for a reduction in congestion, but population and employment keep growing and transportation revenues lose purchasing power, how can the target be achieved? The committee agreed that a benchmark should be developed that tracked the relative investment in transportation along with economic and demographic factors. It agreed to a target that stated: **Ensure that transportation spending keeps pace with growth.**

Operations, Maintenance, and Project Delivery Costs

The Benchmark Committee grappled with the question of whether it costs more in Washington than elsewhere to design, permit and build transportation projects. Data were introduced that seemed to indicate that Washington's cost to build a lane mile of highway far exceeded national averages. Yet when, the committee sought to analyze whether this was true and, if so, specifically what factors might lead to higher costs, it found the data told very different stories.

First, it found that no single data source exists that allows consistent comparisons of project costs across states. Also, it found that each project has factors so specific that even case studies of individual projects were not helpful. The committee considered construction costs, construction wages, permitting and mitigation costs, engineering costs and right-of-way costs and found that some of the permitting and process costs in Washington were probably higher. It found that topography and soil conditions in some parts of the state may lead to higher costs. However, unable to identify a single comparable set of data, for benchmarking purposes, the committee finally agreed to allow transportation experts to revisit the question and adopted a simple target for future use: **Improve operations, maintenance, and project delivery costs.**

Travel Delay per Person

Public and stakeholder input on the previously adopted congestion benchmark using driver delay noted that this benchmark limited its measurement to drivers of single occupant vehicles. It did not look across all modes at the amount of delay experienced by persons traveling on a bus, in a carpool, on a ferry or bicycling. The recommendation urged that a new person delay benchmark be considered.

The committee found that data did not exist that was consistent over time or available for more than individual corridors in urban areas. It chose to recommend a future benchmark for consideration by the new Accountability Board with a target of: **Reduce overall hours of travel delay per person in congested corridors.**